## SEQUENCE LISTING

```
<110> Walke, D. Wade
      Wilganowski, Nathaniel
      Turner, C. Alexander Jr.
      Friedrich, Glenn
      Abuin, Alejandro
      Zambrowicz, Brian
      Sands, Arthur T.
<120> Novel Human Enzymes and Polynucleotides
  Encoding the Same
<130> Lex-0130-USA
<150> US 60/180,413
<151> 2000-02-04
<160> 5
<170> FastSEQ for Windows Version 4.0
<210> 1 .
<211> 777
<212> DNA
<213> Homo sapiens
<400> 1
atqtccctq ccattqcatt qqccttcctq ccactqgtgg taacattqct ggtgcggtac
cggcactact tccgattgct ggtgcgcacg gtcttgctgc gaagcctccg agactgcctg
tcagggctgc ggatcgagga gcgggccttc agctacgtgc tcacccatgc cctgcccggt
gaccctggtc acatcctcac caccctggac cactggagca gccgctgcga gtacttgagc
cacatggggc ctgtcaaagg tcagatcctg atgcggctgg tggaggagaa ggcccctgct
tgtgtgctgg aattgggaac ctactgtgga tactctaccc tgcttattgc ccgagccctg
ccccctgggg gtcgccttct tactgtggag cgggacccac gcacggcagc agtggctgaa
aaactcatcc gcctggccgg ctttgatgag cacatggtgg agctcatcgt gggcagctca
gaggacgtga tcccgtgcct acgcacccag tatcagctga gtcgggcaga cctggtgctc
ctggcacacc ggccacgatg ttacctgagg gacctgcagc tgctggaggc ccatgcccta
ctgccagcag gtgccaccgt gctggctgac catgtgctct tccctggtgc accccgcttc
ttgcagtatg ctaagagctg tggccgctac cgctgccgcc tccaccacac tggccttcca
gacttccctg ccatcaagga tggaatagct cagctcacct atgctggacc aggctga
<210> 2
<211> 258
<212> PRT
<213> Homo sapiens
<400> 2
Met Ser Pro Ala Ile Ala Leu Ala Phe Leu Pro Leu Val Val Thr Leu
                 5
Leu Val Arg Tyr Arg His Tyr Phe Arg Leu Leu Val Arg Thr Val Leu
Leu Arg Ser Leu Arg Asp Cys Leu Ser Gly Leu Arg Ile Glu Glu Arg
                            40
Ala Phe Ser Tyr Val Leu Thr His Ala Leu Pro Gly Asp Pro Gly His
```

60

120

180

240 300

360 420

480

540

600

660

720

777

```
50
                        55
                                             60
Ile Leu Thr Thr Leu Asp His Trp Ser Ser Arg Cys Glu Tyr Leu Ser
                    70
                                         75
His Met Gly Pro Val Lys Gly Gln Ile Leu Met Arg Leu Val Glu Glu
Lys Ala Pro Ala Cys Val Leu Glu Leu Gly Thr Tyr Cys Gly Tyr Ser
            100
                                105
Thr Leu Leu Ile Ala Arg Ala Leu Pro Pro Gly Gly Arg Leu Leu Thr
                            120
Val Glu Arg Asp Pro Arg Thr Ala Ala Val Ala Glu Lys Leu Ile Arg
                        135
                                             140
Leu Ala Gly Phe Asp Glu His Met Val Glu Leu Ile Val Gly Ser Ser
                    150
                                         155
Glu Asp Val Ile Pro Cys Leu Arg Thr Gln Tyr Gln Leu Ser Arg Ala
                165
                                     170
Asp Leu Val Leu Leu Ala His Arg Pro Arg Cys Tyr Leu Arg Asp Leu
                                185
Gln Leu Leu Glu Ala His Ala Leu Leu Pro Ala Gly Ala Thr Val Leu
                            200
Ala Asp His Val Leu Phe Pro Gly Ala Pro Arg Phe Leu Gln Tyr Ala
                        215
                                            220
Lys Ser Cys Gly Arg Tyr Arg Cys Arg Leu His His Thr Gly Leu Pro
                    230
                                         235
Asp Phe Pro Ala Ile Lys Asp Gly Ile Ala Gln Leu Thr Tyr Ala Gly
                245
                                    250
Pro Gly
<210> 3
<211> 507
<212> DNA
<213> Homo sapiens
<400> 3
atgcggctgg tggaggagaa ggcccctgct tgtgtgctgg aattgggaac ctactgtgga
tactctaccc tgcttattgc ccgagccctg ccccctgggg gtcgccttct tactgtggag
cgggacccac gcacggcagc agtggctgaa aaactcatcc gcctggccgg ctttgatgag
cacatggtgg agctcatcgt gggcagctca gaggacgtga tcccgtgcct acgcacccag
tatcagctga gtcgggcaga cctggtgctc ctggcacacc ggccacgatg ttacctgagg
gacctgcagc tgctggaggc ccatgcccta ctgccagcag gtgccaccgt gctggctgac
catgtgctct tccctggtgc accccgcttc ttgcagtatg ctaagagctg tggccgctac
cgctgccgcc tccaccacac tggccttcca gacttccctg ccatcaagga tggaatagct
cagctcacct atgctggacc aggctga
<210> 4
<211> 168
<212> PRT
<213> Homo sapiens
<400> 4
Met Arg Leu Val Glu Glu Lys Ala Pro Ala Cys Val Leu Glu Leu Gly
                                    10
Thr Tyr Cys Gly Tyr Ser Thr Leu Leu Ile Ala Arg Ala Leu Pro Pro
            20
                                25
Gly Gly Arg Leu Leu Thr Val Glu Arg Asp Pro Arg Thr Ala Ala Val
        35
```

60

120

180

240

300

360

420

480

507

```
Ala Glu Lys Leu Ile Arg Leu Ala Gly Phe Asp Glu His Met Val Glu
                         55
Leu Ile Val Gly Ser Ser Glu Asp Val Ile Pro Cys Leu Arg Thr Gln
                    70
                                         75
Tyr Gln Leu Ser Arg Ala Asp Leu Val Leu Leu Ala His Arg Pro Arg
                                     90
                85
Cys Tyr Leu Arg Asp Leu Gln Leu Leu Glu Ala His Ala Leu Leu Pro
           100
                                105
Ala Gly Ala Thr Val Leu Ala Asp His Val Leu Phe Pro Gly Ala Pro
                            120
                                                 125
        115
Arg Phe Leu Gln Tyr Ala Lys Ser Cys Gly Arg Tyr Arg Cys Arg Leu
                        135
His His Thr Gly Leu Pro Asp Phe Pro Ala Ile Lys Asp Gly Ile Ala
145
                    150
                                         155
                                                             160
Gln Leu Thr Tyr Ala Gly Pro Gly
                165
<210> 5
<211> 2316
<212> DNA
<213> Homo sapiens
<400> 5
agetettact etgeetettg ttagetaegt gaeettgage aaageatgea teetetgaae
                                                                        60
cttagcttct tcagaatgga aatcacaata ctgatcctga cttcttaggt tctgaggtca
                                                                       120
gaggaaatgt gagaacactc atgggaagct aagccaggac ctggcatgaa gtaagccaga
                                                                       180
tcctggtggg gtcttgactg ggagaacaat tccccccacc ctcacctcca gctccccta
                                                                       240
tocccacaca gcctggttaa gtccaagctg aattcgcggc cgcttcaaat cccagttctg
                                                                       300
ctctgtgact ctggacaaaa gacttagcct ttctgagccg tggtttgtga aatataagga
                                                                       360
taataattgc tactggcaaa agctacacaa ataggcaaat tgtgggtatg ggattccctc
                                                                       420
                                                                       480
cctacctccc tccaccccag ggcccaggta gggaccatgt cccctgccat tgcattggcc
ttcctqccac tqqtqqtaac attqctqgtq cqqtaccqqc actacttccq attqctqgtq
                                                                       540
cgcacggtct tgctgcgaag cctccgagac tgcctgtcag ggctgcggat cgaggagcgg
                                                                       600
gccttcagct acgtgctcac ccatgccctg cccggtgacc ctggtcacat cctcaccacc
                                                                       660
                                                                       720
ctggaccact ggagcagccg ctgcgagtac ttgagccaca tggggcctgt caaaggggac
caggagggca gctggggcta tggtacaaga gacagatgag accccggctg gttgggagct
                                                                       780
gcagtgaggc aggtaggcat ttgagatatc ttttatcagg ggccctgcat ccatctccca
                                                                       840
                                                                       900
tgtcttctgc aacagccatc tcccctcata ggtcagatcc tgatgcggct ggtggaggag
aaggcccctg cttgtgtgct ggaattggga acctactgtg gatactctac cctgcttatt
                                                                       960
gcccgagccc tgcccctgg gggtcgcctt cttactgtgg agcgggaccc acgcacggca
                                                                      1020
gcagtggctg aaaaactcat ccgcctggcc ggctttgatg agcacatggt ggagctcatc
                                                                      1080
gtgggcagct cagaggacgt gatcccgtgc ctacgcaccc agtatcagct gagtcgggca
                                                                      1140
gacctggtgc tcctggcaca ccggccacga tgttacctga gggacctgca gctgctggag
                                                                      120.0
                                                                      1260
gcccatgccc tactgccagc aggtgccacc gtgctggctg accatgtgct cttccctggt-
gcaccccgct tcttgcagta tgctaagagc tgtggccgct accgctgccg cctccaccac
                                                                      1320
actggccttc cagacttccc tgccatcaag gatggaatag ctcagctcac ctatgctgga
                                                                      1380
ccaggctgag gtccaggccc aggggtactt actgatgccc accccaccc ccacccaagc
                                                                      1440
agggacetea aaateeete eettteetgt ttggggeett gacacacget gggeteaggg
                                                                      1500
ctagggagtc tctcttccca cctctgacct ctttcagcct ctacactgac ctcaagtgtc
                                                                      1560
aagttctatc aggctgcttg gtctcactag gccccctctt tccagagaga accatggact
                                                                      1620
                                                                      1680
gacagcaaga agcctgagct cccgacccag ctctgtcact gatttgctga gtgactccaa
                                                                      1740
gggaatcccc accttgctct gagatttaat cttctctctt aacacgaagg aagctggatg
ggagagetee aggggeetee cagttetegg ceteagaaag ceteceatee teageecatg
                                                                      1800
ccattctggg tgggatcaga ggaagtggca atgagttaga cgccctgcag gaatagctgg
                                                                      1860
atgcaagctg ggccagagaa aatggcacag aaccctggac ccagggccag ggatgccctg
                                                                      1920
```

1980

gccttcccta actctggccc acctagccaa ttaggctttt acccagatct gagaaccaca

	ccccacacag ccaggttgtt ggccagagcc aacccacacg	gtcagagaca gccccacctg gtctttctcc caagtagggc tgttggggag catttatgaa	ctagagccac gcgatgcttt aggtcagggg aagcttcctc	tcacctctga ggagctgtgg catgggactg ccagttctca	ggctggcttg gcaaaggcac gcccattctg	ccaataggaa agaggaacaa cccagaagac	2040 2100 2160 2220 2280 2316	
1. H	·							